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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,183	09/17/2003	Ganesan Vaidyanathan Panchapagesan	132351	8765

6147 7590 05/11/2006

GENERAL ELECTRIC COMPANY  
GLOBAL RESEARCH  
PATENT DOCKET RM. BLDG. K1-4A59  
NISKAYUNA, NY 12309

EXAMINER
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COCKS, JOSIAH C

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 05/11/2006

5/11/06

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/666,183

Applicant(s)

PANCHAPAGESAN ET AL.

Examiner

Josiah Cocks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8,10 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8,10 and 12-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Receipt of applicant's amendment filed 2/14/2006 is acknowledged.

***Drawings***

2. The drawings filed 9/17/2003 are now accepted by the examiner.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 1, 2, 4, 5, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,931,152 to Fafet et al. ("Fafet") (cited by applicant) in view of U.S. Patent No. 5,899,681 to Maughan ("Maughan") and U.S. Patent No. 2,320,754 to Sherman ("Sherman").

Fafet discloses in the specification and Figs. 1-5 an invention in the same field of endeavor as applicant's invention and similar to that described in applicant's claims 1, 2, 4, 5, 6, 8, and 10. In particular, Fafet shows a burner assembly for a cooking appliance including burner grate with a plurality of humps (5) integrally formed in a glass ceramic cooktop and distributed around an opening in the cooktop (see Figs. 1, 3, and 5 and col. 4, line 59 through col. 5, line 22). Fafet also discloses a burner (3) positioned in the opening where the burner includes an arrangement of burner ports (see Fig. 2).

Fafet does not disclose that the burner ports restrict flame formation as a function of non-symmetrical spacing or a plurality of second ports that restrict flame formation. Fafet also possibly does not disclose a plurality of flame-free portions between the burner ports and positioned to cause flames produced by the burner to be directed away from the burner grate.

Maughan teaches a burner assembly in the same field of endeavor as applicant's invention and Fafet. In Maughan, a burner assembly (see Fig. 1) of the same type as that shown in Fafet (see 3 of Fafet) is arranged to include first burner ports (32) and second burner ports (62). The second burner ports are arranged at an angle and include a single inlet end (60) and a bifurcated outlet end (see Fig. 4 and note outlet is bifurcated by section 66). This section 66 is considered to form a flame restricted zone.

In regard to the limitation of claim 1 concerning non-symmetrical spacing, Maughan expressly notes that burner ports of this type of burner are typically but are not necessarily evenly spaced (see Maughan, col. 2, lines 46-49). The examiner considers this disclosure a teaching that the burner ports may be unevenly or non-symmetrically spaced.

In regard to the limitations of the claims regarding restricted and directing away flames from the burner grate. As noted above, Maughan discloses that the selection of uneven burner port spacing is understood in the art. The examiner considers that a person of ordinary skill in the art, in selecting burner port spacing, would understand that it is undesirable to include burner ports that cause flames to impinge upon the burner grate. To support this assertion the examiner turns to the reference to Sherman. Sherman teaches a burner for a cooking appliance in the same field of endeavor as applicant's invention, Fafet, and Maughan. Sherman expressly notes that it is undesirable in the art for flames from a burner to impinge upon grate prongs, as the flames may cause the finish of the prongs to burn off rendering the grates unsightly in appearance (see Sherman, page 1, lines 12-15 and page 3, lines 21-27).

Therefore, the examiner considers that a person of ordinary skill in the art would modify the burner of Fafet to incorporate the burner port configuration of Maughan as this configuration desirably provides for improved flame stability (see Maughan, col. 1, lines 42-62). Further, in selecting the burner port spacing (recognized by Maughan to be adjustable, such as in selecting unevenly/nonsymmetrical spacing, see col. 2, lines 47-49) would desirably choose to prohibit flames from the burner ports from impinging upon the burner grates to desirably prevent the flames from rendering the burner grates unsightly (see Sherman, page 1, lines 12-15 and page 3, lines 21-27).

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6. Claims 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,931,152 to Fafet et al. ("Fafet") (cited by applicant) in view of U.S. Patent No. 5,328,357 to Riehl ("Riehl") and U.S. Patent No. 2,320,754 to Sherman ("Sherman").

Fafet discloses in the specification and Figs. 1-5 an invention in the same field of endeavor as applicant's invention and similar to that described in applicant's claims 12-19. In particular, Fafet shows a burner assembly for a cooking appliance including burner grate with a plurality of humps (5) integrally formed in a glass ceramic cooktop and distributed around an opening in the cooktop (see Figs. 1, 3, and 5 and col. 4, line 59 through col. 5, line 22). Fafet also discloses a burner (3) positioned in the opening where the burner includes an arrangement of burner ports (see Fig. 2).

Fafet does not disclose a second plurality of burner ports configured to provide a second unrestricted flame flow out based at least in part upon the positioning of the burner with respect to the burner grate.

Riehl teaches a burner assembly in the same field of endeavor as applicant's invention and Fafet. In Riehl, the burner includes a first plurality of burner ports (35) providing an unrestricted flame flow out of the burner (see Fig. 4) and a second plurality of burner ports (70) configured to provide a second modified flame flow and arranged in a radial pattern (see Fig. 4). In Riehl, it is also noted that the arrangement of flame ports may be adjusted as desired (see col. 7, lines 60-63).

In regard to the limitations of the claims regarding restricting flames from the burner grate. As noted above, Riehl discloses that the arrangement of flame ports may be adjusted as desired. The examiner considers that a person of ordinary skill in the art, in selecting burner port

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spacing, would understand that it is undesirable to include burner ports that cause flames to impinge upon the burner grate. To support this assertion the examiner turns to the reference to Sherman. Sherman teaches a burner for a cooking appliance in the same field of endeavor as applicant's invention, Fafet, and Riehl. Sherman expressly notes that it is undesirable in the art for flames from a burner to impinge upon grate prongs, as the flames may cause the finish of the prongs to burn off rendering the grates unsightly in appearance (see Sherman, page 1, lines 12-15 and page 3, lines 21-27).

Therefore, the examiner considers that a person of ordinary skill in the art would modify the burner of Fafet to incorporate the burner port configuration of Riehl as this configuration desirably provides for proper flame propagation and prevents flashback problems (see Riehl, col. 2, lines 31-34). Further, in selecting the burner port spacing (recognized by Riehl to be adjustable, see col. 7, lines 60-63) a person of ordinary skill in the art would desirably choose to prohibit flames from the burner ports from impinging upon the burner grates to desirably prevent the flames from rendering the burner grates unsightly (see Sherman, page 1, lines 12-15 and page 3, lines 21-27).

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 2, 4-6, 8, 10, and 12-19 have been considered but are not persuasive.

Applicant disputes that the disclosure in Maughan that "burner ports of this type of burner are typically but not necessarily evenly spaced" (Maughan, col. 2, lines 47-49) is a teaching of uneven or nonsymmetrical burner ports. The examiner does not agree. The plain

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meaning of this sentence in Maughan is that it is recognized in the art that burner ports may be arranged such that they are not evenly spaced.

Applicant further argues that because Sherman teaches a unitary burner and grate that this somehow negates the clear teaching in Sherman that it is undesirable in the art for flames from a burner to impinge upon grate prongs, as the flames may cause the finish of the prongs to burn off rendering the grates unsightly in appearance (see Sherman, page 1, lines 12-15 and page 3, lines 21-27). The examiner does not agree. In response, the examiner notes that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). For the reasons noted above, the combined teachings of Maughan and Sherman clearly suggest applicant's claimed port and grate relationship, namely that the burner ports may be unevenly spaced and that the spacing of the burner ports would be selected such that the flames do not impinge upon the prongs of the grate.

Applicant argues that claims 2, 4, 5, 6, and 8 are allowable as being dependent upon claim 1, which is asserted by applicant to be allowable. As claim 1 is not considered to contain allowable subject matter for the reasons noted above, this assertion of the allowability of claims 2, 4, 5, 6, and 8 is not persuasive.

In regard to claims 12-19, applicant has argued that the reference to Riehl does not suggest the selection of burner port spacing that restricts flame formation in a region proximate the burner grate. In response, the examiner notes that one cannot show nonobviousness by



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attacking references individually where the rejections are based on combinations of references.

See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, for the reasons noted above, the combination of Riehl and Sherman clearly suggests selection of burner port spacing that avoids undesirable flame impingement upon a burner grate.

Accordingly, applicant's claims are not considered to patentably distinguish over the prior art of record.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is

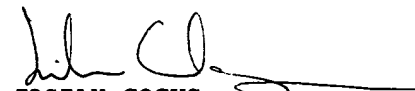
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(571) 272-4874. The examiner can normally be reached on weekdays from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg, can be reached at (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcc  
May 9, 2006

  
JOSIAH COCKS  
PRIMARY EXAMINER  
ART UNIT 3749